

IV. REMARKS

The Examiner has objected to the drawings under 37 C.F.R. 1.83(a) as failing to show every feature specified in the claims. Specifically, the Examiner has asserted that the drawings do not show what is indicated by the phrase "in row and/or column arrangement". Applicants respectfully disagree. The drawings clearly show that the storage room is adapted for holding a multiple number of the boxes accommodated in row and/or column arrangement, as recited in claims 1 and 2. For example, Fig. 2 clearly shows rows of boxes. Fig. 2 also shows columns of boxes. Fig. 1 further shows boxes in column arrangement. This is sufficient to meet the requirement of 1.83(a). The objection should be withdrawn.

The Examiner has rejected claims 11, 12, 17 and 18 under 35 U.S.C. 112 as being indefinite. Applicants note that current amendments to the claims render these issues moot.

The Examiner has rejected claims 1, 4, 9, 13, 14, and 16 under 35 U.S.C. 102(b) as being anticipated by Iwai. The Applicants respectfully disagree. Claim 1 recites a device, for manipulating substrates inside and outside an ultraclean workroom, with a storage room and a sluice device. Claim 1 further recites that the storage room is extending over substantially the entire ultraclean workroom. Iwai shows, in a second embodiment (Figs. 11 and 12), a treatment apparatus having an input/output chamber 112, a load lock chamber 108, and a holding member accommodating chamber 119. A vessel transfer 144 is located within the input/output chamber 112. A vessel storage stage 116 for storing vessels 114 is also located within the input/output chamber 112. Input/output chamber 112 is connected

to the exterior of the apparatus via vessel ports 113, which allow vessels to be transferred between the exterior of the apparatus and the input/output chamber. The input/output chamber 112 is also connected other portions of the apparatus via a cassette extracting stage 117. The vessel transfer 114 is operable to transfer vessels within the input/output chamber 112, among the vessel ports 113, vessel storage stage 116, and cassette extracting stage 117. The cassette extracting stage 117 extracts a cassette C from a vessel 114 located at the extracting stage. When the cassette is extracted, the substrates in the cassette may be extracted by a wafer transfer 152. The wafer transfer 152 is operable to transfer substrates from the cassette C to a wafer boat 106 located in an accommodating chamber 119. A front auto door 120 is provided on the accommodating chamber. When front auto door 120 is in a closed position, it is between the accommodating chamber 119 and the wafer transfer 152. The accommodating chamber also has a rear auto door 121 provided between the accommodating chamber and a load lock chamber 108. A process tube 101 is located on top of the load lock chamber, and the load lock chamber houses mechanisms for transferring a wafer boat between the accommodating chamber 119 and the process tube 101. The Examiner considers an ultraclean workroom to be formed in Iwai between the front auto door 120 wall partition 154. This is not correct. The space referred to by the Examiner is not an ultraclean workroom. As can be seen in Fig. 11, the space within which wafer transfer 152 operates appears to be open to the upper space of the apparatus that surrounds the process tube 101 (upper left corner in Fig. 11). Thus, front auto door 120 does not define a wall of a room that begins at the auto door 120 and extends toward the cassette extracting stage 117. There is nothing to separate the space within which the wafer transfer 152 is located from the space directly over the accommodating chamber

119. Furthermore, Fig. 11 shows the auto door 120 but does not disclose to what extent the auto door extends across the apparatus (into or out of the page in Fig. 11). Fig. 12 shows a schematic perspective view of the apparatus in Fig. 11. From Fig. 12 it can be seen that the width of the apparatus (along the direction perpendicular to the page in Fig. 11) is several times greater than the width of the wafer boat 108. While the width of the accommodating chamber 119 is not disclosed in the figures, there is no reason to believe it should be much greater than the width of the wafer boat 108. There is no disclosure of the accommodating chamber 119, with door 120, extending across the entire width of the apparatus. For these reasons, it is clear that Iwai does not disclose the space between the front auto door 120 and partition wall 154 as being an ultraclean workroom. Iwai does not show a storage room extending over substantially an entire ultraclean workroom, as recited in claim 1. Claim 1 is patentable over Iwai, and the rejections should be withdrawn.


The Examiner has rejected claims 2, 3, 5, 8, 11, 12, 17, and 18 under 35 U.S.C. 103(a) as being obvious over Iwai in view of Ohsawa. The Applicants respectfully disagree. Claim 2 recites a device, for manipulating substrates inside and outside an ultraclean workroom, with a storage room and a sluice device. Claim 2 further recites that the storage room is adapted for holding a multiple number of boxes accommodated in two substantially parallel arrays to define a transport corridor between the arrays. Claim 2 further recites a second manipulating device located within the transport corridor. Iwai is discussed above. Ohsawa shows a heat treatment apparatus 30 with two heat treatment units 3A, 3B. Each heat treatment unit has vertical heat treatment furnaces 31 (Fig. 1). Wafer delivery sections 4A, 4B are provided at the front side of the heat

treatment units 3A, 3B. A carrier accommodation rack 51 extends over wafer delivery sections 4A, 4B. Accommodation rack 51 is shown as an array of four rows and five columns. A second accommodation rack 52 has one row and four columns (see col. 4 lines 37-52). Ohsawa does not show a storage room adapted for holding a multiple number of boxes accommodated in two substantially parallel arrays to define a transport corridor between the arrays, as recited in claim 2. Nor does Iwai show this. As the references do not show all of the features in claim 2, either individually or in combination, the rejections should be withdrawn.

For all of the foregoing reasons, it is respectfully submitted that all of the claims now present in the application are clearly novel and patentable over the prior art of record, and are in proper form for allowance. Accordingly, favorable reconsideration and allowance is respectfully requested. Should any unresolved issues remain, the Examiner is invited to call Applicants' attorney at the telephone number indicated below.

The Commissioner is hereby authorized to charge payment for any fees associated with this communication or credit any over payment to Deposit Account No. 16-1350.

Respectfully submitted,



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4/27/06

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